

279-3268

12/19/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Callista O. Chukwunenye, Ph.D.  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

DEC 19 2012

Subject: Label Amendment – Added Rice Section and Other Label Revisions  
F9870 Herbicide  
EPA Reg. No. 279-3268  
Application Dated: September 20, 2012

Dear Dr. Chukwunenye:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. Amended labeling will supersede all previously accepted ones. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment.

Please note that, with the acceptance of this label amendment, the official product name for this product has been changed to F9870 Herbicide. Please use this product name in all future correspondences with the Agency regarding this product.

If you have any questions regarding this letter, please feel free to contact Maggie Rudick at (703) 347-0257 or [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", enclosed within a large, hand-drawn oval.

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

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Group 14 2 Herbicide

F9870 HERBICIDE

For Agricultural or Commercial Use Only
NOT FOR SALE OR USE IN CALIFORNIA

EPA Reg. No. 279-3268 EPA Est. 279-xxxx

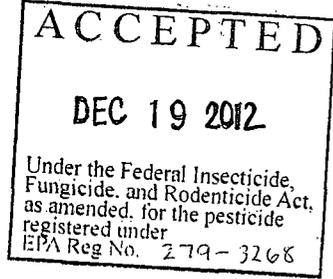


Table with 2 columns: ACTIVE INGREDIENTS (1):, By Wt.
Carfentrazone-ethyl 12.5%
Halosulfuron-methyl 50.0%
Other Ingredients: 37.5%
Total 100.0%

F9870 HERBICIDE is a WDG that contains 62.5% WW of active ingredient per pound of product.
U.S. Patent Nos. 5,125,958 and 4,668,277

KEEP OUT OF REACH OF CHILDREN
CAUTION/AVISO

Si usted no entiende esta etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand this label, find someone to explain it to you in detail).

FIRST AID (2)

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

HOTLINE NUMBER (3)

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

Note to Physician: This product is expected to have low oral and dermal toxicity, and moderate inhalation toxicity. It is expected to be slightly irritating to the skin and minimally irritating to the eyes. This product contains a granular material (sand) that may cause mechanical irritation to the eyes. Treatment is removal of exposure followed by symptomatic and supportive care.

See other panels for additional precautionary information.

PRECAUTIONARY STATEMENTS (4)

Hazards to Humans and Domestic Animals

Caution

Harmful if swallowed, absorbed through the skin or inhaled. Causes moderate eye irritation. Avoid breathing dust. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE) (4.1)

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber 14 mils, and shoes plus socks. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements:

Pilots must use cockpits in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)].

IMPORTANT:

When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
--Remove clothing/PPE immediately if pesticide gets inside. Then wash-thoroughly and put on clean clothing.
--Remove PPE immediately after handling the product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
F9870 12-14-12



**ENVIRONMENTAL HAZARDS (5)**

Carfentrazone-ethyl is very toxic to algae and moderately toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the high water mark, except as specified on this label. Do not contaminate water when disposing of equipment wash waters. Halosulfuron-methyl demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of halosulfuron-methyl in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory: This product and its degradation products may impact surface water quality due to runoff of rain water. This is especially true for poor draining soils and soils with shallow ground water. This product is classified as having high potential for reaching both surface water and aquatic sediment via runoff for several months or longer after application.

**PHYSICAL/CHEMICAL HAZARDS (6)**

Do not use or store near heat or open flame.

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**DIRECTIONS FOR USE (7)**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product through any type of irrigation system.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS (8)**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical-resistant gloves such as butyl rubber, or nitrile rubber 14 mils, and shoes plus socks.

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## STORAGE AND DISPOSAL (9)

Do not contaminate water, food or feed by storage or disposal.

### Pesticide Storage

Store product in original container only. Do not contaminate water, food, or feed by storage or disposal. Store in a cool dry place and avoid excess heat. Do not store below 32F degrees.

### In Case of Spill

Avoid contact. Isolate areas and keep out animals and unprotected persons.

### To Confine Spills

Dike surrounding area; sweep up spillage. Dispose of in accordance with information given under Pesticide Disposal. Wash spill area with water, absorb with sand, cat litter or commercial clay, sweep up and dispose of in an approved manner. Place damaged container in a large holding container. Identify contents per required hazardous waste labeling regulations.

### Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

### Container Disposal

**Metal or Plastic Containers** – Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: **For containers greater than 5 gallons**, empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **For containers 5 gallons or less**, empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

**Refillable Container** - Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

## PRODUCT INFORMATION (10)

F9870 HERBICIDE is a water dispersible granule formulation. F9870 HERBICIDE is to be mixed with water and applied to labeled crops for selective postemergence control of broadleaf weeds. Weed control is best when the product is applied to actively growing weeds up to 4 inches in height. F9870 is a contact and translocated herbicide with minimal residual activity at labeled use rates.

F9870 HERBICIDE is rapidly absorbed through the foliage of plants. Within a few hours following application, the foliage of susceptible weeds show signs of desiccation, and in subsequent days, necrosis and death of the plant occur. Under some environmental conditions and with certain spray tank additives, herbicidal symptoms may appear on the crop. However, the crop recovers quickly with no loss in yield.

Extremes in environmental conditions such as temperature, moisture, soil conditions, and cultural practices may affect the activity of F9870. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicide symptoms is delayed, and weeds hardened off by drought are less susceptible to F9870.

### Mixing and Loading Instructions (10.1)

Fill the spray tank 3/4 full with clean water. Make sure the agitation system is operating while adding products. Prepare a slurry of F9870 HERBICIDE in a clean container using clean water. Slowly add the slurry to the spray tank. Carefully rinse the slurry container adding the rinsate to the spray tank. Complete filling the spray tank to the desired level. The spray tank agitation should be sufficient to ensure uniform spray mixture during application and must continue until the spray tank has been emptied. When tank-mixing with other products, F9870 HERBICIDE should be mixed in the spray tank first. After the F9870 HERBICIDE is thoroughly mixed, add the other products as specified on their label. Ensure the compatibility of other products with F9870 HERBICIDE before mixing them together in the spray tank. Avoid overnight storage of F9870 spray mixtures. Premixing F9870 HERBICIDE spray solutions in nurse tanks is not recommended. Maintain continuous and adequate spray solution agitation until all the spray solution has been applied. Do not use with tank additives that alter the pH of the spray solution below pH 5 or above pH 8. Buffer spray solution to alter the pH range if appropriate.

### Spray Equipment Clean-Out (10.2)

Many new pesticides are very active at low rates, especially to sensitive crops. Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause crop effects if they are not properly cleaned. As soon as possible after spraying F9870 HERBICIDE and before using the sprayer equipment for any other applications, the sprayer equipment must be thoroughly cleaned using the following procedure. In addition, users must take appropriate steps to ensure proper equipment cleanout for any other products mixed with F9870 HERBICIDE as required on the other product labels. More complete cleaning can be achieved if the spray system is cleaned immediately following the application.

1. Drain sprayer tank, hoses, spray boom and spray nozzles. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then thoroughly flush sprayer hoses, spray boom, and spray nozzles with a clean water rinse. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tips) separately in the ammonia solution of Step 2.
2. Next, prepare a sprayer cleaning solution by adding three gallons of ammonia (containing at least 3% active) per 100 gallons of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.

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4. Before using the sprayer, completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles with clean water. Remove and clean spray tips and all filters and screens (tank, spray hose and spray tip) separately in an ammonia solution.
5. Properly dispose of all cleaning solution and rinsate in accordance with Federal, State, and local regulations and guidelines.

Do not apply sprayer cleaning solutions or rinsate to sensitive crops.

Do not store the sprayer overnight or for any extended period of time with F9870 HERBICIDE spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

If the sprayer has been stored or idle, purge the spray boom and nozzles with clean water before beginning any application.

Should small quantities of F9870 HERBICIDE remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to certain crops and other vegetation. FMC accepts no liability for any effects due to inadequately cleaned equipment.

## **APPLICATION INFORMATION (11)**

### **Methods of Application (11.1)**

F9870 HERBICIDE is a versatile herbicide utilizing several different application methods to achieve the desired results. If F9870 HERBICIDE is being applied in standing crop situations, application methods and adjustments must be precise to prevent undesirable effects to the desirable green stem tissue, foliage, blooms or fruit of the crop.

### **Ground Applications (11.2)**

Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at appropriate operating pressures. Utilize nozzles which produce minimal amounts of fine spray droplets. Apply a minimum of 10 gallons of finished spray per acre. Higher spray volumes are required when there is a dense weed population or crop canopy. Spray booms should be adjusted to position spray tips at the minimum height of 18" above the crop and operated to avoid the application of excessive herbicide rates directly over the rows and/or into the whorl of the crop. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in higher application rates and possible crop response.

### **Aerial Application (11.3)**

Use nozzles and arrangements that will provide optimum coverage while producing a minimal amount of fine droplets. Use a minimum of 3 gallons of finished spray per acre. Higher spray volumes are required when there is a dense weed population or crop canopy. Take care to ensure that the application does not drift to non-target areas when applying by air.

### **Spray Drift Management (11.4)**

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND THE GROWER. The interaction of many equipment and weather related factors determine the potential for spray drift.

The following drift management requirements must be followed to avoid off-target movement from applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

Where states have more stringent regulations, they must be observed.

The most effective way to reduce drift potential is to apply large droplets. The optimum drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift when applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

For ground boom applications, apply with a nozzle height of no more than 4 feet above the ground or crop canopy, and when wind speed is 10 mph or less at the application site. Use nozzles that produce fine or coarser spray.

### **Controlling Spray Droplet Size**

**VMD** – VMD is the expression of the droplet size of the spray cloud. The VMD value means that 50% of the droplets are larger than the expressed value and 50% of the droplets are smaller than the expressed value. Optimum F9870 HERBICIDE spray clouds should be 450 microns with fewer than 10% of the droplets being 200 microns or less.

**Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows usually produce larger droplets.

**Pressure** - Do not use pressures greater than that specified by the nozzle manufacturer. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** – For aerial application, orient nozzles so that the spray is released parallel to the airstream. A parallel orientation results in larger droplets than other orientations and reduces air turbulence and the production of small droplets. Significant deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. For aerial applications, solid stream nozzles oriented straight back produce the largest droplets and potentially the least drift.

**Adjuvants** - Not all additives have been tested with F9870. Follow manufacturers' label.

**Boom Length** - For some aerial use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height** – Making applications at the lowest height that is safe reduces exposure of spray droplets to evaporation and wind movement. Aerial applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. For ground applications, apply with a nozzle height of no more than 4 feet above the crop/weed canopy.

**Swath Adjustment** - Swath adjustment distance must increase, with increasing drift potential (higher wind, smaller drops, etc.).

**Wind** - Drift potential is lowest between winds speeds of 3 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Applications shall be avoided below 3 mph due to variable wind direction and high inversion potential. Do not apply F9870 HERBICIDE when wind speed exceeds 10 mph. NOTE: Local terrain can influence wind patterns. Every applicator shall be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity** - When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions** – Do not apply F9870 HERBICIDE during a temperature inversion because the drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the following morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas** – F9870 HERBICIDE shall only be applied when the wind is blowing away from adjacent sensitive areas (e.g. residential areas, bodies of water, known habitats for threatened or endangered species and non-target crops).

**Tank-mixtures (11.5)**

F9870 HERBICIDE may be tank-mixed with other herbicides labeled for the specified crop to control weeds not listed on this label, provided that the tank-mix product does not prohibit such mixing. Read the manufacturer's label directions, restrictions, and use precautions for the companion herbicide. Follow the most prohibitive restrictions and use precautions for all products used. When tank-mixing F9870 HERBICIDE with other products, be sure 9870 HERBICIDE is added to the spray tank first. When tank-mixing 9870 HERBICIDE with other products, use the adjuvants recommended on the tank-mix partner label. These may include non-ionic surfactant (NIS), crop oil concentrate (COC), 28% nitrogen (UAN), ammonium sulfate (AMS) or combinations of these. Leaf speckling can occur when F9870 HERBICIDE is used with certain crop protection products and adjuvants. Do not add a surfactant or crop oil concentrate when tank-mixing herbicides formulated as emulsifiable concentrates. Use tank-mix applications when crop is well established and in the appropriate stage of growth for treatment with F9870 and the tank-mix partner. For optimum results, weed species should also be in the proper stage of growth as specified on the F9870 and tank-mix partner label. Read and follow all manufacturers' label directions for the companion herbicide except for specific directions on this label.

**Application Restrictions (11.6):**

**Chemigation: Do not apply this product through any type of irrigation equipment.**

Following application to foliage, allow 30 days before grazing domestic livestock, harvesting forage, or harvesting silage. Do not apply more than 2 applications per season in corn (field, seed, silage, sweet, and popcorn) and rice. For all herbicide products used during the use season, the total pounds applied of carfentrazone and halosulfuron must not exceed the pounds a.i. per acre per season specified in the table below. Do not apply within 48 days of harvest.

MAXIMUM ALLOWABLE F9870 USE PER ACRE PER SEASON			
Total Allowed F9870 Use*			
Crop	Ounces F9870	Pounds a.i. carfentrazone	Pounds a.i. halosulfuron
Field Corn	2.0	0.016	0.064
Seed Corn	2.0	0.016	0.064
Silage Corn	2.0	0.016	0.064
Sweet Corn	2.0	0.016	0.064
Popcorn	2.0	0.016	0.064
Rice	2.0	0.016	0.064

\*The total allowed usage volumes include all applications made to the field per calendar year. This includes fallow treatments, burndown treatments and all in-season treatments.  
In corn, the 2nd treatment of F9870 HERBICIDE may be applied only with drop nozzles semi-directed or directed.

**Resistance Management (11.7)**

One of the modes of action of F9870 HERBICIDE is the inhibition of the ALS (acetolactate synthase) enzyme. Weed populations may develop biotypes that are resistant to different herbicides with the same mode of action. If herbicides with the same mode of action are used repeatedly in the same field, resistant biotypes may eventually dominate the weed population and may not be controlled by this product. Other resistance mechanisms (e.g., enhanced metabolism) may also exist and may result in reduced weed control.

**CROP ROTATIONAL RESTRICTIONS (12)**

**Labeled crops may be planted at specified time intervals following application of approved rates of F9870 HERBICIDE. Use the time intervals listed below to determine the required time interval before planting.**

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**TIME INTERVAL BEFORE REPLANTING (Months after treatment with F9870)**

Crop	Months
Rice	0
Field Corn	0
Barley (Winter)	2
Oats (Winter)	2
Seed corn	2
Sorghum	2
Spring cereal crops (wheat, oats, barley)	2
Wheat (winter)	2
Popcorn, Sweetcorn	3
Cotton	4
Soybeans	9
Alfalfa	12
Clovers	12
Cucumbers, Pumpkins, Squash	12
Dry beans	12
Eggplant	12
Field peas	12
Forage Grasses	12
Peanuts	12
Peas	12
Peppers	12
Potatoes	12
Proso Millet	12
Radish	12
Rye (winter)	12
Snap Beans	12
Spring Cereal crops (other)	12
Tomato (transplant)	12
Cabbage	15
Canola	15
Carrot	15
Mint	15
Broccoli, Cauliflower, Collards	18
Leeks, Onions	18
Lettuce crops	18
Sunflowers	18
Sugarbeet (Michigan only)	21
Sugarbeet and Red Beet	24
Spinach	24
Sugarbeet (ND, MN, Red River Valley)*	36

\*Also includes other areas where rainfall is sparse or irrigation is required.  
Refer to individual product labels to determine rotation crop restrictions when tank-mixtures are used.

**CORN (13)**

**Field Corn, Seed Corn, Popcorn, Corn Silage, and Sweet Corn (Processing and Fresh Market)**

Apply F9870 HERBICIDE alone or as a tank-mixture with other herbicides to emerged and actively growing weeds. Apply to corn in all tillage systems from crop emergence up to 8-leaf collar corn growth stage. Do not apply when wind speed and direction are likely to cause spray drift. For best performance, make application to actively growing weeds up to 4 inches high and rosettes less than 3 inches across.

**For Broadcast Applications (13.1)**

**Field Corn and Silage Production**

Use 1.0 oz F9870 HERBICIDE product per acre plus NIS at 0.25% volume to volume (2 pints per 100 gallons) with or without UAN or AMS as described in the adjuvant use requirements section. Apply F9870 alone or as a tank-mixture with other herbicides to emerged and actively growing weeds.

**Sweet Corn/ Popcorn Production**

F9870 HERBICIDE may be applied to sweet corn, however, the user assumes all responsibility for herbicide tolerance with such use. All hybrids/varieties have not been tested for sensitivity to F9870 HERBICIDE nor does FMC have access to all seed company or food processor data. Broadcast applications may result in spray being concentrated into the whorl of the plant, which will increase leaf response. To minimize application into the whorl of the plants, drop nozzles or other type directed sprayers must be used to direct the spray to the target weeds and away from the whorl of the plant. Therefore, any crop response arising from the use of F9870 on sweet corn is the responsibility of the user. Use F9870 only under the direction of the seed company, food processor, or State Agricultural Extension Service.

If necessary, a sequential treatment of this product at 1 oz of product per acre may be applied only with drop nozzles directed to avoid application into the corn plant whorl.

**For Directed Applications (13.2)**

**Field Corn and Silage**

F9870 may be applied with drop nozzles or other sprayers capable of directing the spray to the target weeds and away from the whorl of the corn plant. F9870 may be used at 2.0 ounces of formulated product per acre using drop nozzles. Use appropriate rates of adjuvants.

**Sweet Corn, Popcorn Production**

F9870 may be applied with drop nozzles or other sprayers capable of directing the spray to the target weeds and away from the whorl of the corn plant. F9870 may be used up to a maximum of 1.0 ounce of formulated product per acre using drop nozzles for control of larger weed sizes for those weeds listed below under "Control of Weeds". Use appropriate rates of adjuvants.

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**Seed Corn Production (Directed Applications Only)**

For seed production fields, apply F9870 at 1.0 ounce formulated product per acre using drop nozzles or other equipment to make a directed spray treatment. Avoid directing spray solution into the whorl. Seed corn inbreds have generally shown good tolerance to F9870, however, all inbreds have not been tested. Use appropriate rate of adjuvants.

**Adjuvant Use Requirements for Weed Control in Corn (13.4)**

Non-ionic surfactant (NIS) having at least 80% active ingredient at 0.25% v/v (2 pints per 100 gallons of spray solution) can be used. Spray grade ammonium sulfate (AMS) may be used at 2-4 pounds/acre. 28% urea ammonium nitrate (UAN) may be used instead of AMS at 2-4 qts/100 gallons of spray solution. The combination of adjuvants may enhance the level of leaf speckling than either adjuvant alone. Crop oil (COC) or crop oil plus either ammonium sulfate or 28% nitrogen may be used with companion herbicides listed on this label and may be recommended in certain situations.

**WEEDS CONTROLLED OR SUPPRESSED WITH F9870 HERBICIDE IN CORN (13.5)**

Use F9870 HERBICIDE at 1.0 ounce/acre (0.008 pound active ingredient carfentrazone + 0.032 pound active ingredient halosulfuron). Applications should be made by ground equipment using a minimum finished spray volume of 10 gallons of spray per acre using nonionic surfactant at 0.25% v/v (2 pt per 100 gallons of water) with or without UAN or AMS as described in the adjuvant use requirements section of this label.

Weed Species Controlled	Control (weed heights) or suppression by F9870 HERBICIDE	
	1 oz F9870 (0.04 lb ai)	1 oz F9870 (0.04 lb ai/A) per acre plus Banvel/Clarity (4 ounces per acre equivalent)
	Height (inches)	Height (inches)
Anoda, Spurred	1 to 2	2 to 6
Bindweed, Field	Suppression	1 to 4
Buckwheat, wild	1 to 3	3 to 6
Buffalobur	1 to 3	3 to 6
Burcucumber	Suppression	1 to 6
Cocklebur, common	1 to 9	9 to 14
Copperleaf, Hophornbeam	1 to 2	2 to 4
Dayflower, spreading	1 to 2	3 to 4
Devil's-claw	1 to 2	2 to 4
Eclipta	1 to 4	4 to 8
Flatsedge rice*	1 to 9	9 to 12
Fleabane, Philadelphia	1 to 3	3 to 4
Groundcherry, cutleaf	Suppression	1 to 3
Horseweed ("marestail")	Suppression	1 to 4
Hyssop, water	Suppression	1 to 2
Jimsonweed	Suppression	1 to 4
Jointvetch, Indian	1 to 2	3 to 4
Jointvetch, northern	1 to 2	3 to 4
Kochia	1 to 3	3 to 6
Lambsquarters, common	1 to 3	3 to 6
Mallow, Venice	1 to 3	3 to 6
Milkweed, common	Suppression	1 to 3
Milkweed, honeyvine	Suppression	1 to 6
Morningglory spp.	1-3 true leaves	3-4 true leaves
Mustard, wild	Suppression	1 to 4
Nightshade, Eastern black	1 to 4	4 to 6
Nutsedge purple	1 to 4	4 to 6
Nutsedge, yellow	1 to 6	6 to 9
Pigweed, redroot	1 to 4	4 to 8
Pigweed, Palmer (Palmer amaranth)	1 to 4	4 to 8
Pigweed, triazine-resistant	1 to 4	4 to 8
Pigweed, other	Suppression	1 to 4
Pokeweed, common	1 to 6	6 to 12
Potato, volunteer	1 to 3	3 to 6
Purslane, common	Suppression	1 to 3
Radish, wild	Suppression	4 to 6
Ragweed, common	1 to 6	6 to 9
Ragweed, giant	1 to 3	3 to 6
Redstem	Suppression	1 to 2
Sesbania, Hemp	1 to 3	3 to 6
Sida, Prickly	1 to 2	2 to 4
Smartweed, Pennsylvania	1 to 2	2 to 6

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Sunflower, common	1 to 12		12 to 15
Thistle, Russian	1 to 3		3 to 5
Velvetleaf	1 to 9		9 to 18
Waterhemp, common	1 to 2 (with 1% v/v COC)		2 to 6
Waterhemp, tall	1 to 2 (with 1% v/v COC)		2 to 6

\*ALS Resistant biotypes of this weed are known to exist. F9870 will not control these resistant biotypes.

**RICE (FOR PRE-AND POST-EMERGENCE APPLICATIONS) (14)**  
**For Rice Grown in the Southern United States only**

**Timing and Method of Application (14.1)**

Apply F9870 alone or as a tank-mixture with other rice herbicides to emerged and actively growing weeds. Apply to rice in all tillage systems from 30 days before planting up to 60 days prior to harvest. Apply F9870 with either ground or aerial spray equipment as F9870 can be applied as a foliar spray. Do not apply when conditions favor drift.

To control weeds not listed on this label, F9870 may be tank-mixed with other herbicides registered for use on rice. When tank-mixing F9870 with other products, be sure F9870 is mixed in the spray tank water first. For specific mixing instructions, refer to the Mixing and Loading Instructions under the PRODUCT INFORMATION section. Refer to the other product's label for restrictions on tank-mixing, and observe all label precautions, instructions, and rotational cropping restrictions.

**Pre-plant or at-plant Burndown Applications (14.2)**

F9870 may be applied at 1 to 2 ounces (0.040 to 0.079 pound active ingredient) per acre with other labeled herbicides for pre-plant burn down of emerged annual grasses, broadleaf weeds and sedges. Use a minimum of 10 gallons of finished spray per acre for ground application equipment, and a minimum of 3 gallons per acre of finished spray for aerial equipment. For optimum results, apply F9870 to weeds up to 4 inches tall and rosettes less than 3 inches across. Use a non-ionic surfactant (NIS) having at least 80% active ingredient at 0.25% v/v (2 pints per 100 gallons of spray solution) or crop oil (COC) at 0.5 to 1.0% v/v (one-half to one gallon per 100 gallons). Spray grade ammonium sulfate (AMS) may be used at 2-4 pounds/acre. The combination of adjuvants may enhance the level of leaf speckling than either adjuvant alone. Crop oil (COC) at 0.5 to 1.0% v/v (one-half to one gallon per 100 gallons).

**Postemergence Pre-flood Applications to Dry Seeded Rice (14.3)**

Apply F9870 at 1 oz to 2 ounces (0.040 to 0.079 pound active ingredient) per acre. Use a minimum of 10 gallons of finished spray per acre for ground application equipment, and a minimum of 3 gallons per acre of finished spray for aerial equipment. For optimum results, apply F9870 to weeds up to 4 inches tall. Use a quality nonionic surfactant (NIS) at 0.25 to 0.5% v/v (2 pints per 100 gallons of spray solution) having at least 80% active ingredient. For greater activity on certain weeds, use a Crop Oil Concentrate (COC) at 0.5 to 1.0% v/v (one half to one gallon per 100 gallons). Apply when the rice is at the 2 leaf stage or larger, but prior to flooding. Some leaf speckling may occur. Once field is flooded, water must be held for at least 23 days following treatment before release.

**Restrictions**

Do not apply more than 2.0 dry oz. of F9870 Herbicide (0.016 lb ai carfentrazone-ethyl and 0.064 lb ai halosulfuron-methyl) per acre per season including fallow/preplant burndown and other labeled crop applications.

Do not apply more than 2.0 dry oz. of F9870 Herbicide (0.016 lb ai carfentrazone-ethyl and 0.064 lb ai halosulfuron-methyl) per acre as a harvest aid application with a 3-day PHI.

Do not apply when conditions favor drift or when wind is above 10 miles per hour.

Do not apply within 60 days of harvest

**Crop Rotation Restriction:**

After an application of this product to rice, you may only rotate the field to a carfentrazone-ethyl registered crop.

**Post Flood Applications to Exposed Weeds (14.4)**

For post flood applications, apply F9870 to rice and weeds after the establishment of the permanent flood and when 80% of the foliage of the weeds are exposed. Apply F9870 at 1 to 2 ounces (0.04 to 0.077 pound active ingredient) per acre to actively growing weeds. Use a nonionic surfactant (NIS) at 0.25 - 0.5% v/v (2 - 4 pints per 100 gallons of spray solution) having at least 80% active ingredient. For greater activity on certain weeds, use a Crop Oil Concentrate (COC) at 0.5 - 1.0% v/v (2 to 4 quarts per 100 gallons). Apply when the rice is at the 3-leaf stage or later but prior to boot stage. Do not apply within 48 days of harvest. Use a minimum of 10 gallons of finished spray per acre for ground application equipment and a minimum of 3 gallons of finished spray per acre for aerial application equipment. For optimum results, make applications to small rather than larger weeds. If water level has been lowered to allow this treatment, it should be returned to normal levels 24 hours following treatment. Users of F9870 must hold the water on the rice fields for 23 days following treatment.

**WEEDS CONTROLLED OR SUPPRESSED WITH F9870 HERBICIDE IN RICE (14.6)**

	Control (weed heights) or suppression by F9870 HERBICIDE	
	1 oz (0.04 lb ai)	1.5 - 2 oz (0.06-0.08 lb ai)
Weed Species Controlled	Height (inches)	Height (inches)
Cocklebur, common	1 to 9	9 to 14

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Dayflower, spreading	1 to 2	3 to 4
Eclipta	1 to 4	4 to 8
Flatsedge rice**	1 to 9	9 to 12
Fleabane, Philadelphia	1 to 3	3 to 4
Jointvetch, Indian	1 to 2	3 to 4
Jointvetch, northern	1 to 2	3 to 4
Mallow, Venice	1 to 3	4 to 12
Milkweed, honeyvine	Suppression	up to 6
Nutsedge*, purple	1 to 4	4 to 6
Nutsedge*, yellow	1 to 6	6 to 8
Pigweed, spp.	1 to 3	4 to 6
Radish, wild	Suppression	4 to 6
Ragweed, common	1 to 6	6 to 9
Ragweed, giant	1 to 3	4 to 6
Sesbania, Hemp	1 to 3	3 to 6
Sida, Prickly	1 to 2	3 to 4
Smartweed, Pennsylvania	1 to 2	2 to 3
Sunflower, common	1 to 12	12 to 15
Velvetleaf	1 to 9	9 to 12
Copperleaf, Hophornbeam	Suppression	up to 2
Groundcherry, cutleaf	Suppression	up to 3
Hyssop, water	Suppression	up to 2
Morningglory spp.	Suppression	up to 2
Purslane, common	Suppression	up to 2
Redstem	Suppression	up to 2

\*Sequential applications of F9870 may be required for heavy populations.

\*\*ALS Resistant biotypes of this weed are known to exist. F9870 will not control these resistant biotypes.

	Suppression by F9870 HERBICIDE	
	1 oz (0.04 lb ai)	1.5 - 2 oz (0.06-0.08 lb ai)
Weed Species Suppressed	Height (inches)	Height (inches)
Alligator weed	no suppression	1 to 2
Ducksalad	no suppression	1 to 2
Lambsquarters, common	1 to 2	2 to 3

**TERMS OF SALE OR USE AND LIMITATION OF WARRANTY AND LIABILITY (15)**

**Terms of Sale and/or Use**

On purchase of this product buyer and user agree to the terms and conditions as follow.

**Packaging**

Distributors/Dealers/Retailers shall sell in original packages only.

**Warranty**

FMC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use section when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonable foreseeable to (or beyond the control of seller or FMC), and buyer assumes the risk of any such use.

**Use Directions**

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risk inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC of Seller. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any F9870 HERBICIDES relating to such factors.

**Use of Product**

FMC's directions for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

F9870 HERBICIDE, when used as directed, may result in crop injury, crop loss or crop damage. FMC recommends that the user and/or grower test F9870 HERBICIDE in order to determine its suitability for the intended use. FMC makes F9870 HERBICIDE available to the user and/or grower solely to the extent that the benefit and utility, in the sole opinion of the user and/or grower, outweigh the extent of potential injury associated with the use of F9870 HERBICIDE. The decision to use, or not to use, F9870 HERBICIDE must be made by each individual user and/or grower on the basis of possible crop injury from F9870 HERBICIDE, the severity of weed infestations, the cost of alternative weed control measures and other factors. Because of the risk of crop damage, all such use is at the user and/or grower's risk.

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